

WHAT IS CLAIMED IS:

1. A valve assembly, comprising:

a valve housing connectable to an intake of an engine and to a carbon canister to selectively establish fluid communication therebetween, the housing defining at least one interior cavity; and

a pressure sensor supported on the valve housing and communicating with the cavity, the sensor outputting a signal representative of pressure in the cavity.
2. The valve assembly of Claim 1, wherein the pressure sensor is electrically connected to a computing apparatus on a vehicle supporting the engine.
3. The valve assembly of Claim 1, wherein the valve housing defines an interior guidance rib, and the rib is formed with an orifice through which the sensor communicates with the cavity.
4. The valve assembly of Claim 1, wherein the valve housing holds a valve movable between an open configuration, wherein fluid communication between the intake and the canister is established, and a closed configuration,

wherein fluid communication between the intake and the canister is not established.

5. The valve assembly of Claim 1, wherein the signal from the sensor is sent to a processor for generating a warning signal if the signal reaches a threshold.

6. The valve assembly of Claim 1, wherein the pressure sensor is enclosed in a sensor housing and the sensor housing is on the valve housing.

7. The valve assembly of claim 6, wherein the sensor housing is made integrally with the valve housing.

8. A fuel vapor purge system for an engine having an associated fuel tank, an intake, and means for trapping fuel vapor from the fuel tank at least when the engine is not operating, the purge system comprising:

means for selectively establishing fluid communication between the trapping means and the intake when the engine is operating; and leak sensing means supported on the trapping means for outputting a signal representative of whether a leak to exists in the purge system.

9. The system of Claim 8, wherein the trapping means is established by a carbon canister and the means for selectively establishing is established by a

purge valve having a valve housing defining a cavity and holding valve means movable between an open configuration, wherein fluid communication between the intake and the canister is established, and a closed configuration, wherein fluid communication between the intake and the canister is not established.

10. The system of Claim 9, wherein the leak sensing means is a pressure sensor supported on the valve housing and communicating with the cavity, the sensor outputting a signal representative of pressure in the cavity.

11. The system of Claim 10, wherein the pressure sensor is electrically connected to a computing apparatus on a vehicle supporting the engine.

12. The system of Claim 10, wherein the valve housing defines an interior guidance rib, and the rib is formed with an orifice through which the sensor communicates with the cavity.

13. The system of Claim 10, wherein the signal from the sensor is sent to a processor for generating a warning signal if the signal reaches a threshold.

14. The system of Claim 10, wherein the pressure sensor is enclosed in a sensor housing and the sensor housing is on the valve housing.

15. The system of claim 14, wherein the sensor housing is made integrally with the valve housing.

16. A purge valve for an engine fuel vapor recovery system, comprising:

a valve housing defining a cavity and holding a valve therein, the valve housing being formed with a carbon canister port connectable to a carbon canister line and an engine intake port connectable to an engine intake line;

a valve in the valve housing and movable between an open configuration, wherein fluid communication between the intake and the canister is established, and a closed configuration, wherein fluid communication between the intake and the canister is not established; and

a pressure sensor supported by the valve housing and communicating with the cavity for generating a signal representative of pressure in the cavity.

17. The purge valve of Claim 16, wherein the valve housing defines an interior guidance rib, and the rib is formed with an orifice through which the sensor communicates with the cavity.

18. The purge valve of Claim 17, wherein the pressure sensor is enclosed in a sensor housing and the sensor housing is on the valve housing.

19. The purge valve of Claim 18, wherein the sensor housing is made integrally with the valve housing.